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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/764,910

01/26/2004

Michael K. Bugenhagen

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EXAMINER

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/764,910	Applicant(s) BUGENHAGEN ET AL.	
	Examiner Man Phan	Art Unit 2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-19, 21-28 is/are rejected.
- 7) ☒ Claim(s) 6 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is in response to applicant's 02/11/2008 Amendment in the application of Bugenhagen et al. for a "Congestion handling in a packet communication system" filed 01/26/2004. This application is a Request for Continued Examination (RCE) under 37 C.F.R. 1.114 filed on March 31, 2008. The proposed amendment to the claims has been entered and made of record. Claims 1, 15 have been amended. Claims 1-28 are pending in the present application.

2. The applicant should use this period for response to thoroughly and very closely proof read and review the whole of the application for correct correlation between reference numerals in the textual portion of the Specification and Drawings along with any minor spelling errors, general typographical errors, accuracy, assurance of proper use for Trademarks TM, and other legal symbols @, where required, and clarity of meaning in the Specification, Drawings, and specifically the claims (i.e., provide proper antecedent basis for "the" and "said" within each claim). Minor typographical errors could render a Patent unenforceable and so the applicant is strongly encouraged to aid in this endeavor.

Claim Rejections - 35 USC ' 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-5, 7-19, 21-28 are rejected under 35 U.S.C.103(a) as being unpatentable over Addagatla et al. (US#2005/0157646) in view of Das et al. (US#2005/0070230).

With respect to claims 1-2, the references disclose method and system for network congestion control in a packet communication system utilizing the Session Initiation Protocol (SIP) message, according to the essential features of the claims. Addagatla (US#2005/0157646) discloses in Fig. 7 a signaling diagram illustrated a call setup in the packet communication system between source 602 and destination 604, in which the proxy server 612 is capable of receiving and forwarding SIP signaling messages, such as SIP signaling messages to and/or from a network node comprising a fixed terminal operating as an originating SIP client 602. SIP is independent of the packet layer and only requires an unreliable datagram service, as it provides its own reliability mechanism. The embodiments of this invention provide for a bandwidth limit

to be established during the SIP session such that the bandwidth of the source 602 is limited (or "throttled") to minimize or prevent congestion caused by a source, network and destination having differing bandwidth connections or throughput (*a SIP message will contain priority indicators corresponding to various media resources, or media streams*)(See also Figs. 6A-6B and [0069]-[0072]). Addagatla et al. (US#2005/0157646) further teaches an exemplary SIP packet illustrated in Fig. 8 comprised of a method name 802 (e.g., "Invite"), a request URI 804, (the Request-URI is a Uniform Resource Identifier and identifies the resource upon which to apply the request), headers 806, and message payload 808. In one embodiment of the invention, information about the bandwidth connection of the source 602, the destination 604, or any packet-processing platforms (not shown) that handle the communications between the source 602 and destination 604 is included in the header 806. The bandwidth connection of the destination 604 is included in the header 806 of the return message. Also, information about the bandwidth of packet processing platforms in the network 606 is returned to the source 602. Therefore, the source 602 will have bandwidth information about itself, the destination 604 and the network 606 between the source 602 and the destination 604 includes congestion notification. The source 602 may then set a bandwidth limit ("throttle value") that is at the lowest value of bandwidth connection or throughput of the source 602, destination 604 or network 606 ([0073] plus).

It's noted that in the communication system gateways, such as media and mobile gateways, can implement call blocking to avoid congestion and reduce the impact on VoIP quality. At the packet level, Differentiated Services (DiffServ) and Multi-Protocol Label Switching (MPLS) technologies assign multiple priorities or levels to voice calls and isolate

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voice traffic from data and other traffic types. DiffServ is generally discussed in "An Architecture for Differentiated Services" by Blake, et al., RFC2475, December, 1998 and MPLS is generally discussed in "Multiprotocol Label Switching Architecture" by Rosen et al, RFC 3031, January 2001, both herein incorporated by reference in their entireties. For example, calls above a "Routine" level do not experience any call blocking. They receive priority treatment from the routers within the network; thus, experience little, if any, packet loss. The "Routine" calls experience call blocking during network congestion. The Diffserv marking of the packets reflects packet level priorities; hence, the routers can offer preferential treatment for high priority call types. This guarantees that even during heavy traffic overloads, the packets of priority calls receive adequate service. The "Routine" calls may experience small amounts of packet loss; however, VoIP calls can tolerate packet loss values of 1-3%. For emergency purposes, even 5-10% packet loss is considered acceptable.

Traditional telephone networks, known as Public Switched Telephone Networks (PSTN) or Plain Old Telephone Service (POTS), generally handle call congestion by having the switches in the network communicate. For example, an originating switch transmits a call setup message, often termed as "SS7," for a call to a destination switch. If the destination switch is experiencing congestion it will not properly handle incoming calls. Responsive to receiving the call setup message, the destination switch processes a priority bit of the call setup message to determine if the call is a high priority call. If the call is a high priority call, then the destination switch attempts to connect the call. If the call is not a high priority call, then the destination switch may discard the call attempt if it has already sent an SS7 congestion message or may transmit an SS7 congestion message to the originating switch. Responsive to the congestion message, the

originating switch performs call blocking on calls headed for the destination switch. The originating switch also provides call treatment for the blocked calls, such as playing tones or a message.

However, Addagatla does not disclose expressly wherein processing the priority information in the header of the call request message to determine if the call request message is for a high priority call. In the same field of endeavor, Das et al. (US#2005/0070230) teaches specifically to the Quality of Service (QoS) management and admission control for voice calls of varied classifications or prioritizations in a voice-over IP (VoIP) network, and provide a differentiation in quality based on the priority level of the call as well as provide quality to all calls in the system. The highest priority calls, for instance, must not be blocked, and receive the best voice quality, even during traffic overloads and IP network congestion. Das teaches in Fig. 3 the flow charts illustrated a series of method steps for processing new voice calls based upon relative priority and network capacity, in which the method 300 starts at step 302 and proceeds to step 304 where Party A sends an invitation message to first softswitch 112.sub.1. The SIP invite message includes the dialed digits of Party B. If such new call is to be indicated as a relatively high priority call (as explained in greater detail below), Party A dials a prefix assigned to such higher priority calls as part of the dialed digits or indicate the priority in the message header field. At step 306, first softswitch 112.sub.1 initiates an authorization check to determine if Party A is registered on the network and is allowed to originate high priority calls. The specific decision step 308 determines whether Party A has specific authorization to create the high priority call. If it is determined (by, for example, prior data base or preset network profiles) that Party A is not authorized to originate a higher priority call, then the method proceeds to step 310

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where the new call request is cleared and the method ends at step 312. If Party A is authorized to originate a high priority call, the method proceeds to step 314 where the priority level for the new call is set and a search is performed to determine which softswitch in the network has access to Party B. This step is essentially a mapping function that obtains the edge router serving Party B and making the appropriate network interconnections thereto ([0031]-[0032], [0048]).

It's also noted that the priority access and channel assignment feature in communications is well known in the art, in which the calls from the user devices are prioritized, and the call processing system distinguished between a regular or high priority subscriber. The call processing system may also distinguish between a regular, high or low priority call. As the volume of calls increases on packet networks and the cost for providing service decreases, the feature of prioritizing calls becomes more and more important to the service providers and the users.

Regarding claims 3-5, 14, Addagatla further teaches the limitation wherein the response message has a header that includes a congestion code indicating the state of congestion in the call processing system (See Fig. 8; [0073]), and to perform the call blocking in response to the congestion ([0075]; See also Fig. 5 of Das et al. [0023]-[0036]).

Regarding claims 7-13, Addagatla further teaches the limitation wherein the call processing system comprises a gateway controller (See Fig. 1B-C, [0046] plus); wherein the call processing system is configured to determine whether the call processing system is in the state of congestion ([0013]-[0015]); wherein the call request message comprises an SIP INVITE message (See Fig. 8; [0073] plus).

Regarding claims 15-19, 21-28, they are method claims corresponding to the apparatus claims above. Therefore, claims 15-19 and 21-28 are analyzed and rejected as previously discussed with respect to the claims 1-5, 7-14 above.

One skilled in the art would have recognized the need for effectively and efficiently allocation of QoS resource and network congestion control in a packet communication system, and would have applied Das's novel use of the priority-based quality of service in VoIP into Addagatla's teaching of the network congestion control in the exchange of data over an Internet Protocol (IP) network. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Das' method for management of VoIP communications of various relative priority levels into Addagatla's system and method of network congestion control by UDP source throttling with the motivation being to provide a method and system for congestion handling in a packet communication system.

Allowable Subject Matter

6. Claims 6 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is an examiner's statement of reasons for the indication of allowable subject matter: The closest prior art of record fails to disclose or suggest wherein the call processing system is configured to transmit a message indicating that the call processing system is no longer in the state of congestion; and the end communication device is configured to stop performing

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call blocking responsive to the message indicating that the call processing system is no longer in the state of congestion, as specifically recited in the claims.

8. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Schuster et al. (US#6,650,619) is cited to show the method and system for facilitating increased call traffic by reducing signaling load in an emergency mode.

The Karlsson (US#2006/0251050) show the call admission control in VoIP systems.

The Punjabi (US#7,372,810) is cited to show the self managing directory service for VoIP networks.

The Peters, Jr. et al. (US#7,254,643) is cited to show the system and method for providing multi media services to communication devices over a communications network.

The Bessis et al. (US#2004/0240389) is cited to show the method and apparatus for load sharing and overload control for packet media gateways under control of a single media gateway controller.

The Kiuchi et al. (US#6,882,653) is cited to show the gateway system having controller and signal processor for interconnecting IP network and telephone network and method for controlling alternative routing at the time of fault of gateway system.

The Shyy et al. (US#6,985,740) is cited to show the system for and method of providing priority access service and cell load redistribution.

The Qureshi et al. (US#6,980,517) show the method and apparatus for congestion control for packet based networks using call gapping and rerouting in the peripheral domain.

The Smith et al. (US#6,741,694) is cited to show the telecommunications service control point with code blocking.

The Elliott et al. (US#6,614,781) is cited to show the Voice over data telecommunications network architecture.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149. The examiner can normally be reached on Mon - Fri from 6:00 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel, can be reached on (571) 272-2988. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

11. Information regarding the status of an application may be obtained from the Patent

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Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-9197.

Mphan

05/30/2008

/Man Phan/

Primary Examiner, Art Unit 2619